



# Source Water Assessment Program (SWAP) Report For Fabrigo, Inc.

## What is SWAP?

The Source Water Assessment Program (SWAP), established under the federal Safe Drinking Water Act, requires every state to:

- ? Inventory land uses within the recharge areas of all public water supply sources;
- ? Assess the susceptibility of drinking water sources to contamination from these land uses; and
- ? Publicize the results to provide support for improved protection.

## SWAP and Water Quality

Susceptibility of a drinking water source does *not* imply poor water quality. Actual water quality is best reflected by the results of regular water tests.

Water suppliers protect drinking water by monitoring for more than 100 chemicals, treating water supplies, and using source protection measures to ensure that safe water is delivered to the tap.

Prepared by the  
Massachusetts Department of  
Environmental Protection,  
Bureau of Resource  
Protection,  
Drinking Water Program

Date Prepared:  
July 3, 2001

**Table 1: Public Water System (PWS) Information**

<b>PWS NAME</b>	Fabrigo, Inc.
<b>PWS Address</b>	19 Industrial Park Road
<b>City/Town</b>	Oxford
<b>PWS ID Number</b>	2226013
<b>Local Contact</b>	David Baril
<b>Phone Number</b>	(508) 987-5900

<b>Well Name</b>	<b>Source ID#</b>	<b>Zone I (in feet)</b>	<b>IWPA (in feet)</b>	<b>Source Susceptibility</b>
Well #1	2226013	108	425	High

## Introduction

We are all concerned about the quality of the water we drink. Drinking water wells may be threatened by many potential contaminant sources, including septic systems, road salting, and improper disposal of hazardous materials. Citizens and local officials can work together to better protect these drinking water sources.

### Purpose of this report:

This report is a planning tool to support local and state efforts to improve water supply protection. By identifying land uses within water supply protection areas that may be potential contaminant sources, the assessment helps focus protection efforts on appropriate best management practices (BMPs) and drinking water source protection measures. Department of Environmental Protection (DEP) staff are available to provide information about funding and other resources that may be available to your community.

### This report includes:

1. Description of the Water System
2. Discussion of Land Uses within Protection Areas
3. Recommendations for Protection
4. Attachments, including a Map of the Protection Areas

## 1. Description of the Water System

The well for the facility is located in the woods to the northeast of the on-site building. The well has a Zone I of 108 feet and an Interim Wellhead Protection Area (IWPA) of 425 feet. The well is 305 feet deep. The well is located in an aquifer with a high vulnerability to contamination due to the absence of hydrogeologic barriers that can prevent contaminant migration. Please refer to the attached map of the Zone I and IWPA.

The well serving the facility has no treatment at this time. For current information on monitoring results and treatment, please contact the Public Water System contact person listed above in Table 1.

### What is a Protection Area?

A well's water supply protection area is the land around the well where protection activities should be focused. Each well has a Zone I protective radius and an Interim Wellhead Protection Area (IWPA).

- **The Zone I** is the area that should be owned or controlled by the water supplier and limited to water supply activities.

- **The IWPA** is the larger area that is likely to contribute water to the well.

In many instances the IWPA does not include the entire land area that could contribute water to the well. Therefore, the well may be susceptible to contamination from activities outside of the IWPA that are not identified in this report.

### What is Susceptibility?

Susceptibility is a measure of a well's potential to become contaminated due to land uses and activities within the Zone I and Interim Wellhead Protection Area (IWPA).

## 2. Discussion of Land Uses in the Protection Areas

There are a number of land uses and activities within the drinking water supply protection areas that are potential sources of contamination.

Key issues include:

1. **Inappropriate Activities in Zone Is;**
2. **An Aboveground Storage Tank (AST) With Propane;**
3. **Hazardous material storage and use;**
4. **Septic system;**
5. **Very small quantity hazardous waste generator; and**
6. **Machine/metal working.**

The overall ranking of susceptibility to contamination for the well is High, based on the presence of at least one high threat land use or activity in the IWPA, as seen in Table 2.

1. **Zone Is** – Currently, the well does not meet DEP's restrictions, which only allow water supply related activities in Zone Is. The facility's Zone I contains parking areas. The public water supplier does not own and/or control all land encompassed by the Zone I. Please note that systems not meeting DEP Zone I requirements must get DEP approval and address Zone I issues prior to increasing water use or modifying systems.

#### Recommendations:

- ✓ Remove all non-water supply activities from the Zone I to comply with DEP's Zone I requirements.
- ✓ Do not use road salt within the Zone I.
- ✓ If the facility intends to continue utilizing the parking areas in the Zone I, use BMPs and restrict activities that could pose a threat to the water supply.

2. **Aboveground Storage Tank (AST)** –An AST with propane is located within the IWPA. Propane is considered a low threat to water supplies..

#### Recommendations:

- ✓ Operate the propane tank in a manner consistent with Massachusetts's plumbing, building, and fire code requirements. Consult with the local fire department for any additional local code requirements regarding propane tanks.

**Table 2: Table of Activities within the Water Supply Protection Areas**

Potential Contaminant Sources	Zone I	IWPA	Threat	Comments
Parking lot	Yes	Yes	Moderate	Limit road salt usage and provide drainage away from wells
Aboveground Storage Tank	No	Yes	Low	Propane for heating building
Storage of hazardous materials	No	Yes	High	Store paints and thinners
Septic System	No	Yes	Moderate	See septic system brochure
Very small quantity hazardous waste generator	No	Yes	Low	Stored in separate area from work area
Machine/metal working shop	No	Yes	High	Use of paints and thinners in every day operations

\* -For more information on Contaminants of Concern associated with individual facility types and land uses please see the SWAP Draft Land Use / Associated Contaminants Matrix on DEP's website - [www.state.ma.us/dep/brp/dws/](http://www.state.ma.us/dep/brp/dws/).

## Glossary

**Zone I:** The area closest to a well; a 100 to 400 foot radius proportional to the well's pumping rate. To determine your Zone I radius, refer to the attached map.

**IWPA:** A 400 foot to ½ mile radius around a public water supply well proportional to its pumping rate; the area DEP recommends for protection in the absence of a defined Zone I. To determine IWPA radius, refer to the attached map.

**Zone II:** The primary recharge area defined by a hydrogeologic study.

**Aquifer:** An underground water-bearing layer of permeable material that will yield water in a usable quantity to a well.

**Hydrogeologic Barrier:** An underground layer of impermeable material that resists penetration by water.

**Recharge Area:** The surface area that contributes water to a well.

**3. Storage of hazardous material** - Any form of painting of any final product is contracted out, but a small amount of paint is stored at the facility. Thinners are used in their everyday operations. Improper handling, spills and leaks of paints and thinners are potential sources of contamination.

### Recommendations:

✓ Use Best Management Practices and comply with regulations regarding the handling, storage and shipping of the hazardous materials and waste.

**4. Septic system** - The septic system for the facility is located within the IWPA. If a septic system fails or is not properly maintained it could be a potential source of microbial contamination. Improper disposal of household hazardous chemicals to septic systems is a potential source of contamination to the water supply.

### Recommendations:

✓ Staff should be instructed on the proper disposal of spent household chemicals. Include custodial staff, groundskeepers, and certified operator.

✓ Septic system components should be located, inspected, and maintained on a regular basis. Refer to the appendices for more information regarding septic systems.

**5. Very small quantity hazardous waste generator** - The facility is a registered Very Small Quantity Hazardous Waste Generator. The waste is collected in well labeled 55 gallon drums, and removed by a licensed hauler.

### Recommendation:

✓ Continue to use best management practices for storing and managing hazardous waste.

**6. Machine/metal working shop** - Daily activities at the facility include the use of thinners, which if improperly handled, or leaked, could become potential sources of contamination..

✓ Continue to manage thinners and use BMPs for their handling and storage.

Implementing the following recommendations will reduce the system's susceptibility to contamination.

## 3. Protection Recommendations

Implementing protection measures and best management practices (BMPs) will reduce the well's susceptibility to contamination. Fabrico, Inc. should review and adopt the key recommendations above and the following:

### Zone I:

✓ Continue to keep non-water supply activities out of the Zone I

✓ Conduct regular inspections of the Zone I. Look for illegal dumping, evidence of vandalism etc.

✓ If it's not feasible to purchase privately owned land within the Zone I at this time, consider a conservation restriction that would prohibit potentially threatening activities or a right of first refusal to purchase the property.

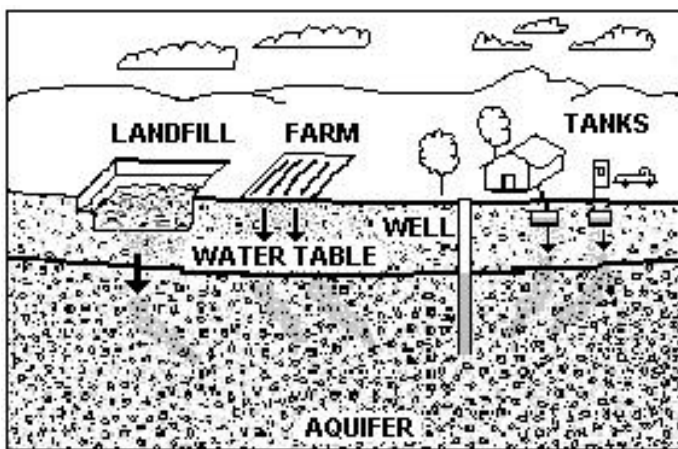


Figure 1: Example of how a well could become contaminated by different land uses and activities.

### **For More Information:**

Contact **Josephine Yemoh-Ndi** in DEP's **Worcester Office** at **(508) 792-7650 x 5030** for more information and for assistance in improving current protection measures.

More information relating to drinking water and source protection is available on the Drinking Water Program web site at:

[www.state.ma.us/dep/brp/dws/](http://www.state.ma.us/dep/brp/dws/)

### **Additional Documents:**

To help with source protection efforts, more information is available by request or online at [www.state.ma.us/dep/brp/dws/](http://www.state.ma.us/dep/brp/dws/), including:

1. Water Supply Protection Guidance Materials such as model regulations, Best Management Practice information, and general water supply protection information.
2. MA DEP SWAP Strategy
3. Land Use Pollution Potential Matrix
4. Draft Land/Associated Contaminants Matrix

Copies of this assessment have been provided to the public water supplier, town boards, the town library and the local media.

### **Training and Education:**

- ✓ Train staff on proper hazardous material use, disposal, emergency response, and best management practices; include custodial staff, groundskeepers, and certified operator.
- ✓ Work with your community to ensure that stormwater runoff is directed away from the well and is treated according to DEP guidance.

### **Facilities Management:**

- ✓ Implement standard operating procedures regarding proper storage, use and disposal of hazardous materials.
- ✓ Upgrade all oil/hazardous material storage tanks to incorporate proper containment and safety practices.

### **Planning:**

- ✓ Work with local officials in Oxford to include the facility IWPA in Aquifer Protection District Bylaws and to assist you in improving protection.
- ✓ Have a plan to address short-term water shortages and long-term water demands. Keep the phone number of a bottled water company readily available.
- ✓ Supplement the SWAP assessment with additional local information and incorporate it into water supply educational efforts. Use a potential contaminant threat inventory to assist in setting priorities, focusing inspections, and creating educational activities.

These recommendations are only part of your ongoing local drinking water source protection. Citizens and community officials should use this SWAP report to spur discussion of local drinking water protection measures.

## **4. Attachments**

- Map of the Public Water Supply (PWS) Protection Area.
- Recommended Source Protection Measures Factsheet
- Your Septic System Brochure
- Source Protection Sign Order Form

